



Caring, daring and precaution

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Published in:

Achieving global environmental quality: Integrating science and management

Publication date:

2002

Document Version

Publisher's PDF, also known as Version of record

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Citation (APA):

Harremoës, P., & Krauss, M. K. V. (2002). Caring, daring and precaution. In *Achieving global environmental quality: Integrating science and management: SETAC 23rd Annual Meeting - Abstract Book* (pp. 69-69). Society of Environmental Toxicology and Chemistry.

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307 **Caring, daring and precaution.** Harremoës, P. and Kreyer von Krauss, M. Environment & Resources, Technical University of Denmark. The "Precautionary Principle" (PP) is a poor translation from the German term "Vorsorgeprinzip", introduced in laws on air pollution in 1973. Poor, because "Vorsorge" is better translated as "Care". "Precaution" has a connotation of restrictiveness and restraint from bold action. This interpretation of the principle is a misconception, because it takes courage to dare to invoke the precautionary principle, when it is interpreted as taking action under circumstances of high stakes and significant uncertainty. The report recently published by the European Union, "The Precautionary Principle 1896-2000 - Late Lessons from Early Warnings", concluded that the PP can be interpreted as a set of normative rules that should be accounted for in any situation of high stakes and significant uncertainty in decisions regarding regulation of activities that impact on health and environment. A broader interpretation of the principle deals with decisions regarding choice of burden and level of proof. The current, tacit interpretation and regulation of risk is biased by a lack of differentiation between the groups that may suffer from the risk of making the wrong decision. This involves considerations like fairness and equity, which are not determined by concepts of natural science, but by ethics. The broadest interpretation of the principle involves a full "pro et con" analysis, taking into account all factors, including those on which economic information is either not available, very uncertain and/or indeterminate. In European terminology, this is the point where the PP must be supplemented by the Principle of Proportionality, according to which the cons (cost) of a regulation should be proportionate to the pros (benefits) achieved. In ethical terms, this is where deontological considerations have to be balanced against utilitarian considerations. It is interesting that international literature surveys of the typology and terminology of risk do not expand on the interpretation of the cause-effect relationship, e.g. to discuss whether this relationship is derived via causation or association. The cause-effect relationship is the bridge between the source of hazards and the effects. That is the location of significant uncertainty to be accounted for in implementing the Precautionary Principle.